

5 dispersing the blowing agent in the melt with shearing of the melt thereby
6 creating a mixture; /

7 retaining the mixture within a predetermined pressure range for a predetermined
8 retention time;

9 subjecting the mixture to less shearing, with respect to the shearing during the
10 dispersing step, during the predetermined retention time;

cooling the mixture to a temperature that is above the solidification temperature of the melt;

13 granulating the cooled mixture; and

14 acting on the mixture with static mixer elements; and

15 wherein the method is carried out in a single apparatus in which the mixture is
16 acted upon continuously by means of the static mixing elements as the mixture moves through
17 the apparatus for avoiding segregation.

Sub E 19. (Amended) The method of claim 16 further comprising [extruding]
2 forming the mixture after cooling to form strands and chilling formed strands with a coolant.

REMARKS

Claims 16-26 and 28-29 are pending.

Claims 16-26 and 28-29 are pending stand rejected under 35 USC §112, First Paragraph, as containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. The Examiner states that in claim 16, line 1, the limitation “which does not use extruders” does not appear to have support in the original disclosure. It is respectfully submitted that page 2, lines 12-31 clearly support the claims wherein no extruders are used. This portion of the specification points out that “Large quantities of EPS or another comparable granulate cannot be economically produced by extruders, because a plurality of extruders used in parallel would have to be used.” The specification goes on to point out that “The use of the equipment according to the invention, in which the impregnation of the plastics melt may be carried out in a single apparatus, represents an economical advantage. The teaching of the present invention is based substantially on the

discovery, that large quantities of expandable plastics granulate may be produced in an apparatus only if provisions against segregation of the melt and blowing agent are possible and are made. According to the invention static mixing elements act during the whole course of the process continuously onto the mixture in such a way that segregation is avoided.

Compared with the known methods using extruders, the method according to the present invention has the further advantage that much less energy ... is needed for the production of expandable plastics granulate." Thus, it is respectfully submitted that the limitation in claim 16, line 1, "which does not use extruders" does have adequate support in the original disclosure. Accordingly, it is respectfully requested that the rejection be withdrawn.

The Examiner further points out that claim 19, line 1, recites a process step of "extreme beam mixture after cooling." Applicants have amended claim 19 to make it consistent with claim 16 and thus, it is respectfully submitted that the rejection is now moot. Accordingly, it is respectfully requested that the rejection be withdrawn.

Claims 16-17, 19-23, 25 and 28 stand rejected under 35 USC §103(a) as being unpatentable over Buckner (U.S. Patent No. 3,751,377) in view of Muirhead et al. (U.S. Patent No. 3,372,215).

Claims 18 and 29 stand rejected under 35 USC §103(a) as being unpatentable over Buckner in view of Muirhead et al. and in further view of Muller et al. (U.S. Patent No. 4,314,606).

Claims 24 and 26 stand rejected under 35 USC §103(a) as being unpatentable over Buckner in view of Muirhead et al. and further in view of Suh (EP 0 445 847 83).

These rejections are respectfully traversed and reconsideration is respectfully requested.

It is respectfully submitted that none of the cited references disclose a method that does not use extruders and wherein the method is carried out in a single apparatus in which the mixture is acted upon continuously by means of static mixing elements as the mixture moves through the apparatus in order to avoid segregation. As previously noted, such a method allows for the impregnation of plastics melt to be carried out in a single apparatus thus providing an economical advantage. Such a method further allows for the production of large quantities of expandable plastics in the apparatus if provisions against segregation of the melt

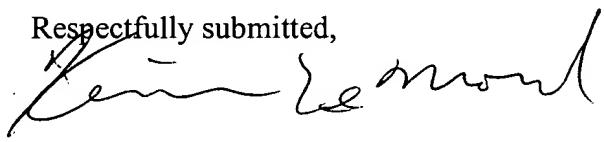
and blowing agent are made. Thus, the method utilizes static mixing elements over the course of the process in order to avoid such segregation. Accordingly, it is respectfully submitted that claim 16 is allowable. The remaining claims depend, either directly or indirectly on claim 16 and therefore, are allowable for at least the reasons claim 16 is allowable.

CONCLUSION

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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